

The \$27 Filament Rack

Holds ~126 rolls · all wood · one afternoon

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free plans



I outgrew the 40-roll rack I'd used for years, so I built my own. It holds about 126 rolls for ~\$27 in wood — here's exactly how, free.

9 rows

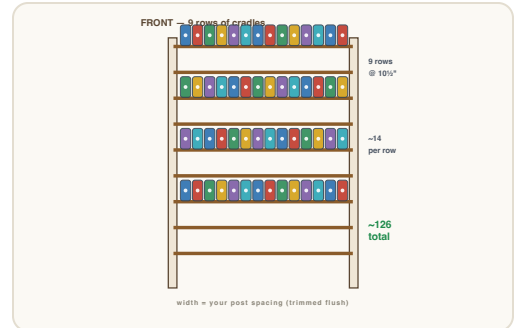
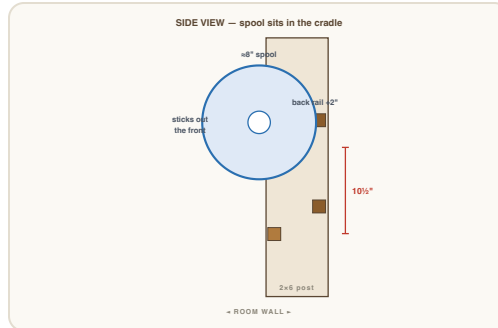
10½" pitch (9" gap)

back rail +2"

~14/row

~126 rolls

~\$27 in wood



Materials

2 × 2x6 × 8 ft

Vertical side posts — cut down to your ceiling height. The 5½" depth runs wall→room and forms the cradle.

1x2 × 8 ft strips

Horizontal rails. Each row uses TWO (a front + a back), 9 rows = 18 rails. Cut from 1x2 stock.

2" wood screws

One at each end of every rail (~36) + a few to hit a wall stud. This is what actually holds it.

Brad nails or wood glue

OPTIONAL — just to hold each rail steady until the screws go in. Skip it if you can clamp.

Tools

- Circular saw or miter saw
- Rotary tool w/ cutoff wheel (Ryobi) — great for the floor-level rail & back trims
- Drill + pilot bit
- 18-ga brad nailer (optional)
- Tape measure, pencil & stud finder

Build it

- 1 Cut both 2x6 posts down to your ceiling height. These stand vertically; the 5½"-deep face runs from the wall out into the room.
- 2 Lay a post flat. Starting near the base on the FRONT edge, mark the first rail, then mark up every 10½" (bottom-of-rail to bottom-of-rail). That leaves a clean 9" gap between rails — 9 marks, 9 rows.
- 3 For each row, mount the BACK rail about 2" HIGHER than its front rail. That tilts every spool back toward the wall so it seats in the cradle, sticks forward a touch for an easy grab, and can't roll off the front.
- 4 Hold each 1x2 in place while you fasten it — a brad nailer or a dab of wood glue works, but both are optional (a clamp is fine). Run the rails full length, overhanging the posts; don't pre-cut to width.
- 5 Drill pilot holes, then drive one screw at each end of every rail — the screws are what hold it. (Pilot holes keep the 1x2 ends from splitting.)
- 6 Trim the overhang: line up one end flush, then cut the excess off the other end — same on the front and back — for a clean rectangle at whatever width your posts sit. A rotary tool with a cutoff wheel makes the tight cuts (the bottom rail by the floor, the back trims) easy.
- 7 Stand it against the wall, screw the back into a stud so a full load can't tip it — then load up. Drop a spool into each cradle; front-to-back it holds ~14 per row.

Tips from the build:

- Mount the rails long and trim flush at the end — way faster than measuring and cutting each one first.
- A brad nail (or dab of glue) just holds the rail still until you screw it — totally optional. The screws do the real work.
- A rotary tool with a cutoff wheel beats a circular saw for the awkward cuts — the bottom rail against the concrete and the back trims.

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Every layer matters, and so do you.